

## ANALYSING THE IMPACT OF PERFORMANCE MANAGEMENT AND INTERNET OF THINGS ON PROJECT SUCCESS IN LARGE ENTERPRISE

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### ABSTRACT

*The industrial world is flourishing day by day where each organization is trying to reach to the best potential success managing the extreme competitiveness in this contemporary world. Organization success is inevitably determined by efficient performance, and those performances must be organized through a systematic way. Performance manager (PM) and Internet of Things (IoT) are the two crucial things within the organizational structure which ultimately determines the success of the organization. This study is developed illustrating the key features of PM and IoT and their role in organizational success. Major purpose of this study demonstrates the functions of these to reach success and how it works connecting the available resources and strategies of the business. Performance management is considered as the key driver of the business which organizes the entire management; similarly the IoT enables the management gathering multiple data of management over the internet. Furthermore, this article focuses on the current situation of IoT implementation and performance management within organizational boundaries in the entire globe as well as under the domestic boundary of India. In some ways, these appraises and evaluates the entire management depicting the future vision of success and loss, as both of them raises the assumption about the outcomes acquiring propensity to break and make the entire organization. Additionally, this study describes those features why it is necessary to acquire a suitable performance management and IoT implementation in business and how it works in achieving the best potential success of the business in the long-term.*

**Keywords:** Internet of Things (IoT), Project Management (PM), Key features of IoT and PM, organizational success

### Introduction

Organizations undertake projects assuming it will create more opportunities in the business and will be beneficial for the success of the business. The performance management organizes the entire stages of the business, on the other side the Internet of Things creates the connectivity in the business and boosts the strategic procedure of the business. Here, in this article the concept of PM, and IoT are described briefly along with the key features in acquiring organizational success. The study has focused on the typical characteristics of these ingredients of business in order to describe how it works to find the potential outcome. Furthermore, it concentrates on the current situation of PM implementation, and use of IoT in achievement of business success in India.

### Literature review

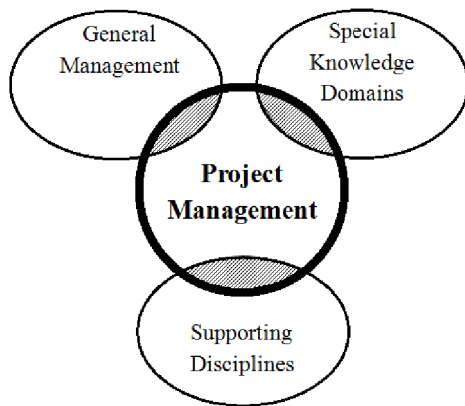
#### Concept of performance management and internet of things (IoT)

Project management (PM) is the strategic procedure of planning, creation, managing, and implementing the business strategy to contribute to organizational success. In business strategy, rather than concentrating on the execution of business operations, the project management illustrates the broader picture [9]. It concentrates on three major areas to ensure the best potential profit for the business. The PM is linking the project with the strategy of the business which takes time to recognize specific projects before the foundation of the business.

Internet of Things (IoT) depicts the network of external objects- 'objects' which are constituted with software, sensors, and other technologies in order to connect and exchange

various data with other devices through the internet [10].. It is the systematic approach of business procedures which acts through the internet. Low-cost computing, analytics, mobile technologies everything is adjusted and interacted through IoT. Hyper Connected organizational activities are determined by the specific features of IoT where major industries are managing the extreme competitiveness through this connection over the internet.

In order to get the best potential success for the organization, it needs to be started from the



**Figure 1: Key features of PM and IoT**

Naturally, the key thing that is necessary to reach any organizational success is to develop an intuitive plan. Efficient performance management system gives automatic prompts so that the focused task cannot be skipped Figure 1: Role of project management in entire management structure

On the other hand, IoT works to enable the connectivity of the business; here the connectivity means the link between the strategy and available resources of business over the internet. IoT assures the integration of business procedures through systematic approach which is relevant and necessary to meet the objectives of the business. Available data is managed and processed through the proper system, and for that it is referred to as the data manager of the business.

Application of procedures, knowledge, skills or the experience goes under the criteria of PM in

right place. The HRM of any organization must need to understand the key features of PM along with the functions of IoT in getting the organizational success. First necessity of performance management is to establish the PM is easy-to understand which determines the ultimate success of the business. Key features of PM and IoT are described in the following table-

Performance Management (PM)	Internet of Things (IoT)
Intuitive and automated process	Connectivity tool
Evaluation tool	Data manager
Goal-setting ingredient	Hyper connectivity tool
Manager log	Sensing system through technological implementation

(Source: Self-developed)

unnecessarily [8]. Likewise, PM is denoted as self-evaluation tools of the business by which the entire procedures of the strategic plan can be justified easily.

(Source: Inspired by [5])

order to fulfill the objectives of business. It consists derivable which are constrained to the inevitable timescale or the targeted budget of any organization. Key conductor of PM is the wide range of varieties with different variables of organization strategy constituting the needs of success. On the other hand, an efficient PM denotes efficient awareness of business that is necessary to precede the organizational activities [9]. Below are several reasons for which the IoT and PM is considered relevant and necessary for organizational success.

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Role of PM	Role of IoT
Gives future vision about the organizational success	Boost the entire management
Develop and train the strategy of the business	Creates connectivity and enables every stakeholders of the business
Gives clarity to the business and boost the employees	Create more scope and drive the objectives
Creates opportunities	Set the best conversation

Table 2: Role of PM and IoT in organizational success

(Source: Self-developed)

Consistently monitoring and balancing the organizational performance, through PM the professionals can observe the potential success of the business. Through the PM the strategic plan of the business can be detected early and for that it faces fewer obstacles to conduct the business procedures. Clarity in the business procedures is also established through the proper implementation of PM [7].

Similarly, the role of IoT in organizational success is not less as it helps in boosting the entire management, creating efficient connectivity in the business management [10]. It also works like the efficient data manager of the business which establishes the suitable connectivity among each stakeholder of the business, setting the relevant conversation in the business strategy.

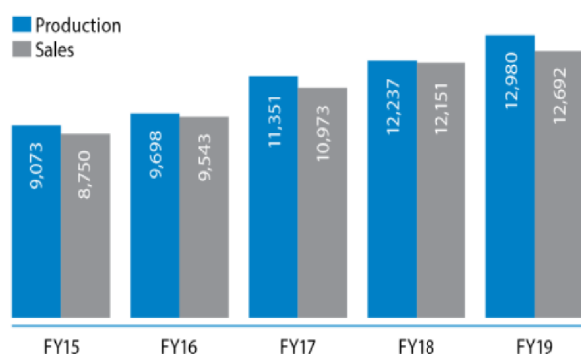
### Proposed method

This study has been developed based on secondary **data** including literature review, journals, and multiple documents which discusses performance management and IoT. Collected secondary data has given the best idea about the role and importance of PM, and IoT exploring key features of these in organizational success [11]. The **qualitative analysis** of those second hand data helps in comparing the various roles of PM in management and boosting the employee motivation within the organizational boundary; on the other side it illustrates how IoT establishes relevant networking in the business procedures.

### Discussion

#### Performance management of Tata Steel in India

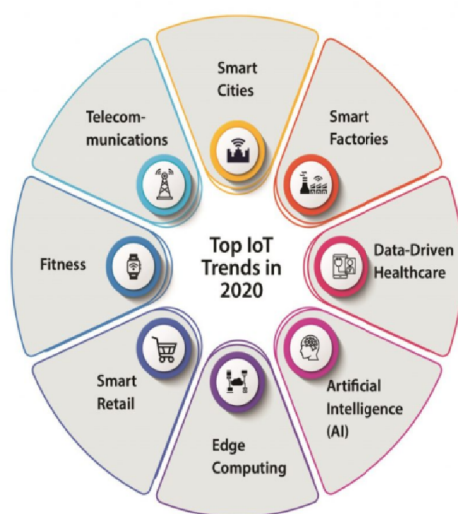
Organizational success is undoubtedly determined by the PM; hence it maintains the communication in the business management procedures. Tata Steel is one of the huge organizations in India which has been preceding its business for years. In the Kalinagar plant, the company has invested approximately 22,000 core for the next fiscal year [3]. High and flat production management was the great target of the Kakinagarproject, where the company seeks its profit through cost management procedures. Investment amount has to be maintained through the creating more facilities in the business. Boosting employee motivation and employee retention are the significant approaches to continue the business procedures, as the employees are considered as the greatest asset of business. Tata Steel has concentrated on the well-being of its employees to continue the consistency in the business success. Recently, in the covid-19 pandemic time, the company has set a great example declaring the education facilities and aid for those families of the employees of the company who have suffered due to the Covid attack [2]. There is no doubt that the great decision will fuel the motivation of the employee, making them feel safe and giving assurance about their good future on behalf of the company.

**Figure 1: production and sales of Tata Steel in last FYP (tons)**

(Source: Inspired by [4])

It can be seen that the production and sales of Tata Steel in last FYP of Tata Steel the sales and production of the company has been increasing, where the total production of the company was 9,073 tons and sales was 8,750 tons in FY15, on the other side the production and sales increases as 12980 and 12692 respectively in FY19 [4]. The increase in production and sales are determined by the improvement of performance of the company.

### IoT implementation in India

**Figure 2: Top IoT trends in India**  
(Source: Inspired by [5])

IoT introduction in India is concentrating on the next level industrial revolution in India, which is now is namely recognized as 4.0 playing the lead role evolving the IoT in the structure of the organizational management [5]. Digital India program is initiated through this technological implementation of IoT by the government of India in recent days [5]. The socio-economic development of India is now determining this unique innovative approach.

IoT implementation within the organizational boundary of India is increasing in India over time, and the networking is becoming stronger over time through which the organizations are seeking their success. IoT networking systems are various types including objectives, electronic devices, tags which act like unified identifiers of organizational success with systematic approach. Through the smart implementation organizations are becoming stronger increasing their productivity and sales linearly. According to a report of 2020 about the expenditure on IoT by IDC, it has doubled the growth in 2021 tackling the crucial period of [pandemic with 11.3% CAGR [5]. Smart censoring in every kind of organization whether it is the business organization or the healthcare, the potential business success can be noticed easily. Creating the suitable web through IoT implementation, the organizations are trying to find organizational success in the pandemic period. Without the external inclusion and complex procedures the data are managed properly by the internet-enabled devices.

According to the report of June, 2020, the total investment for IoT was approximately USD 5Bn in 2019, and it was estimated that it will increase USD 20 Bn by the year 2023. The top industries where the IoT implementation can be noticed in a huge range includes fitness, smart retail, telecom communications, artificial intelligence, smart factories, edge computing, and many more [5].

Though the efficiency of IoT inclusion consists of huge efficiency in the organization management spreading necessary networking and managing the available data, the number of challenges is not any less. Weak authorization can act adversely; likewise interoperability and data integrity can also create gaps in the business procedure that is crucial to meet the success [7].

### Conclusion

Observing the key features of PM and implementation of IoT in order to meet the organization's success, it can be said that without proper management any organization cannot meet the success. Hence, the entire framework is set under the organized parity of the performance. All types of business management such as cost management, time

management or employee management are specifically determined by the ultimate performance as well as the performance management. Whether it is about the employee retention or the captivation of the management procedures, the PM works as the conductor in each place similarly. In the same field of organizational success the IoT creates integration. AI-based technological implementations are increasing now-a-days

where the organizational world is trying to seek the success of eliminating unnecessary haphazardness and obstacles to conduct the business. There are multiple examples that are getting success by the relevant implementation. The qualitative analysis in this article is hopeful in giving the best understanding about the PM and IoT in organizational success to the readers and the peer researchers.

### References

1. Almohtaseb, A.A., Shaheen, H.A.K., Alomari, K.M. and Yousef, M.A., 2020. Impact of talent management on organizational performance: The moderating role of an effective performance management system. *International Journal of Business and Management*, 15(4), pp.11-24.
2. Bhat, O., Bhat, S. and Gokhale, P., 2017. Implementation of IoT in smart homes. *Int. J. Adv. Res. Comput. Commun. Eng*, 6(12), pp.149-154.
3. Franco-Santos, M. and Otley, D., 2018. Reviewing and theorizing the unintended consequences of performance management systems. *International Journal of Management Reviews*, 20(3), pp.696-730.
4. Tatasteel, 2021. Integrated Report & Annual Accounts 2018-19. [Online]. <https://www.tatasteel.com/investors/integrated-report-2018-19/index.html> [Accessed on August 10 2021]
5. Gov, 2021. IoT Policy Document. [Online] Available at: [https://www.meity.gov.in/sites/upload\\_files/dit/files/Draft-IoT-Policy%20%281%29.pdf](https://www.meity.gov.in/sites/upload_files/dit/files/Draft-IoT-Policy%20%281%29.pdf) [Accessed on August 10 2021]
6. Jesudoss, A., Nikhila, Y. and Reddy, T.S., 2018. Smart solution for women safety using IoT. *Int. J. Pure Appl. Math*, 119, pp.43-49.
7. Manavalan, E. and Jayakrishna, K., 2019. A review of Internet of Things (IoT) embedded sustainable supply chain for industry 4.0 requirements. *Computers & Industrial Engineering*, 127, pp.925-953.
8. Rao, P.K., Sai, P.T., Kumar, N.V. and Sagar, S.K., 2020. Design and Implementation of Smart helmet Using IoT. Available at SSRN 3643615.
9. Richards, G., Yeoh, W., Chong, A.Y.L. and Popovič, A., 2019. Business intelligence effectiveness and corporate performance management: an empirical analysis. *Journal of Computer Information Systems*, 59(2), pp.188-196.
10. Zuhdi, S., Daud, A., Hanif, R., Nguyen, P.T. and Shankar, K., 2019. Role of Social Media Marketing in the Successful Implementation of Business Management. *International Journal of Recent Technology and Engineering*, 8.
11. Mohajan, H.K., 2018. Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7(1), pp.23-48.